Universal Service/Network Democracy
Week Four (September 16 – September 22)

In the fourth week of the Universal Service/Network Democracy on-line seminar, we will go over the following topics:

- Summary of the Third Week of the Seminar

- New Developments in the Seminar

- Remaining Topics to Discuss

- Aggregation and Competition

- Assignments

Preliminaries

If you have not yet read the page on Preliminaries to the Universal Service/Network Democracy on-line seminar, please read it now. The Preliminaries page contains information on the following items:

- How the Seminar Functions
- What is Authoritative
- Registration
- What's Required
- How to Post
- Etiquette
- Library Resources
- How This All Works (coming soon)

Summary of the Third Week of the Seminar

The seminar continued at the rapid pace set previous weeks. There were 59 electronic mail messages from 33 different people. These people were divided among the various participant groups as follows:

- Schools and Libraries: 15 people, 27 messages (46%)
- Universities: 4 people, 6 messages (10%)

- State and federal government: 5 people, 8 messages (14%)
- Business: 9 people, 18 messages (30%)

In addition to the seminar's e-mail-facilitated discussion a new component was added last week. This involved an on-line survey which highlighted topics relating to the previous week's discussion on the scope of Universal Service subsidies. The on-line survey proved to be an effective mechanism for increasing the percentage of seminar registrants who were able to make direct contributions to the discussion each week. So far 89 people have completed the survey, including 46 who had not previously participated in the on-line discussion. If you have yet to complete the survey, please do so now. It takes just a few minutes to fill out, and it helps address some of the important issues that we are trying to tackle in the seminar.

Results of the survey on the scope of Universal Service are now available on-line. The on-line summary of results will be updated periodically as more people complete the survey. In addition to a numerical tabulation of the results, we have also compiled the additional comments that people entered on their survey forms. You will find a number of insightful remarks among these comments.

Here is a brief overview of the survey results:

1. Purpose: How should we view the purpose of the Universal Service Fund for schools and libraries? Is it to provide equity of access to telecommunications services, or is it to establish a public right of access to such services?

> Results were split, with nearly 2/3 defining the purpose as equity and 1/3 defining it as a public right. Many commenters felt that the question was ambiguous and suggested that Universal Service should serve both of these goals.

> My own interpretation of these phrases was that a "public right" implies that all citizens should have access to the resource, while "equity" implies that there should be no disparities of access. Several of the commenters came up with better statements than this, and I would welcome further discussion of this point during the upcoming week.

2. Educational Needs: In terms of the needs of teachers, students and library patrons, what types of telecommunications services are of the current greatest interest to schools and libraries?

> Almost everyone identified Internet Data Services as a major need. Approximately 40% cited Voice and Video. One commenter raised the issue of *digital convergence*, which is an important enough topic to merit separate discussion.

3. Breadth vs. Depth: Should the range of services covered by the Universal Service Fund be narrow, so that the magnitude of available discounts can be large, or should the range of services be broad, which would result either in smaller discounts or a larger Fund?

The majority (60%) of the respondents favor a broad fund with enough money to provide substantial discounts for all covered services.

4. Services to be covered: Which types of services should be eligible for subsidy under the Universal Service Fund?

Site Connectivity was mentioned by almost everyone. 70% listed Upgrades of Telecommunications Capabilities. Both of these items are items which are clearly eligible for Universal Service support under the Telecommunications Act. 50% of the respondents also cited Internal Wiring, Routers and Servers, and Technical Support. Since these are not services in the traditional province of telecommunications service providers, it may be more difficult to include them in Universal Service support, but there is obviously a strong interest in finding the funds for these essential items.

Please consult the on-line summary for a more complete picture.

Highlights of the additional comments from the surveys are as follows:

- Clarification of Universal Service as an equity issue or a public right.
- Using Universal Service to stimulate competition.
- Digital convergence – the coming together of previously disparate telecommunications services.
- Sources of Universal Service funding.
- Availability of "advanced" services to schools and libraries.
- Using Universal Service subsidies to leverage local funding.
- Cost as a barrier to access and equity.
- Removing barriers to public access to government (and other) information.
- Need of local school districts and libraries for assistance and guidance in technology implementation.

These are all important points for us to consider. Many of them have shown up in our previous discussions, but their repeated mention serves to underscore their importance.

The principal topic for the third week's discussion had to do with the *allocation* of Universal Service subsidies for schools and libraries. This discussion was organized around a set of questions that were posed in the material placed on-line at the beginning of the week. Given the success of the on-line survey for issues of *scope* we'll be extending the discussion of allocation issues with another on-line survey in the upcoming week. Hence I'll give only the briefest summary of the responses received so far on last week's questions.

Should there be cash grants or vouchers available directly to schools or school districts?

The majority of comments favor discounted services rather than cash grants or vouchers. There is a fear that grants and vouchers would be harder for schools and libraries to administer than discounted services. Few people addressed the positive side of grants and vouchers, which is that they might allow more flexibility than

discounted services.

Should there be an "E-rate" (educational rate) defining special discounts for schools and libraries?

> Most people interpreted this as an alternative to grants and vouchers, and it received a number of positive comments. The phrase "E-rate" refers to a specific proposal for free connectivity for schools and libraries, something that gives many people pause, since there is a fear of having groups subscribe to a free service whether they need it or not. I would like to encourage further on this topic.

How should one define a bona fide request for telecommunications services? What minimal justifications should a school, library or school district have to offer in support of such a request?

> This question was raised because of language in the Telecommunications Act which requires that requests from schools and libraries be certified as *bona fide*. The majority of respondents favor leaving this matter to local school districts and library systems, although there is a recognition that many such groups may lack the information and knowledge to make wise choices in this area. This is the other side of the coin of the issues relating to technical support and staff development that we have discussed previously.

Should Universal Service subsidies extend to groups which provide educational materials or support for educational organizations, such as universities and colleges or community centers?

> This idea has received a lukewarm reaction in comments so far. The majority oppose this as a dilution of the Universal Service fund and an extension well beyond its intended scope.

A new on-line survey will allow for additional input on these issues in the course of the present week.

In addition to the topics listed above, there were a number of other threads of discussion which took place on-line. Of particular note were the following:

- *The relative merits of graphical user interfaces (GUI) vs. plain text.* While several people advocated limiting Universal Service subsidies to plain text services, others pointed out that GUIs enormously reduce training costs and extend the potential audience for on-line services.

- *Wireless technologies.* Enthusiastic postings from advocates of new wireless technologies were met with scepticism about the effective reach of such technologies and the ease with which they can be managed by most schools and libraries. Clearly this technology offers much promise, but as with all technologies, it can't be viewed as a one-size-fits-all solution.

- *Free e-mail.* There were several mentions of Internet services which offset the cost of e-mail accounts through paid advertisements. Services of this type don't really address the infrastructure issues which are the province of the Telecommunications Act. They can't scale to serve whole-school populations, and they are inherently inefficient in the way they use telecommunications infrastructure. Nonetheless they are a very attractive means of introducing people to on-line services and could play a role in initiating such activities in areas where there are not otherwise readily accessible.

- *Telecommunications services for the homeless.* Several people discussed the practicality of providing such services through schools and libraries.

- *Job skills through the use of telecommunications.* Several people approached this important issues from different directions – one having to do with the SCANS report and the other having to do with how the availability of telecommunications services in schools and libraries will produce a workforce better able to make use of these services in an effective manner in the workplace.

I hope the preceding brief summary doesn't distort the positions presented during the previous week's discussion. As always, you should consult the original material for the authoritative word on these issues.

The assignments for the third week were a logical extension of previous assignments, namely to participate in the on-line discussion, to provide materials for the library of on-line resources and to complete the on-line survey. We have already discussed the surveys in some detail and have summarized the on-line discussion. You can look directly at the full text of the on-line discussions and the many contributions to the on-line library. We appreciate the effort that people have been putting into the seminar and urge you to continue this work in the next two weeks.

New Developments in the Seminar

As in previous weeks, there were several new developments on the technical front in the seminar.

As discussed above, the survey capability that was introduced last week will be extended to provide surveys on other topics of interest during the seminar. We have set things up so that the analysis of these surveys can be done automatically as people fill out the survey forms. Availability of a survey on issues relating to the allocation of Universal Service subsidies will be announced in an e-mail message on September 16.

A second new development has to do with the extension of the library of on-line resources. Many new contributions were received during the week, and these have all been linked into the Universal Service/Network Democracy Web site.

Remaining Topics to Discuss

We have been working with a list of four major topics:

- **Scope.** What services should be covered by the Universal Service subsidies?
- **Aggregation.** How can schools and libraries share services with each other and with other community groups to maximize efficiency and effectiveness?
- **Allocation.** Who gets the subsidies and under what conditions?
- **Integration.** How will new discounts fit in with existing programs?

We have covered questions of *scope* and *allocation* in the two weeks just concluded. I propose to deal with the other two issues in the next two weeks, linking them for the purpose of efficiency to two other topics which I mentioned last week:

- **Other Proceedings.** The present seminar is focussed upon Section 254 of the Telecommunications Act. Other sections of the Act are also of importance for schools and libraries, and in some cases there are separate proceedings under way for these other topics. Some mention has already been made of the proceeding which deals with wireless technologies. I would like to summarize these other proceedings and try to indicate their relevance for schools and libraries.
- **Competition.** An important principle underlying the Telecommunications Act of 1996 is the idea of enhanced competition. We need to consider how Universal Service subsidies can be structured so as to enhance the competitive environment. Many examples exist which show how such an environment can benefit schools and libraries, but it is not a given that true competition will arise without planning and forethought.

We'll approach these topics as follows:

- **Week Four: Aggregation and Competition.** How can schools and libraries share services with each other and with other community groups to maximize efficiency and effectiveness? And how can these activities be structured so as to enhance competition?
- **Week Five: Integration and Other Proceedings.** How will new discounts fit in with existing programs? And what other proceedings at the federal and state level should people in schools and libraries be following to assure that there will be adequate coordination of the various programs which impact telecommunications services for schools and libraries?

Aggregation and Competition

How can schools and libraries share services with each other and with other community groups? How can these activities be structured so as to foster competition among telecommunications providers?

This week's major topic will be the question of how schools and libraries can aggregate services for increased efficiency and effectiveness. We'll try weaving in with this topic one of the over-arching issues of the Telecommunications Act, namely the goal of increased competition.

These two questions may strike some people as being contradictory, but I think there are some important issues which can be exposed by exploring the connection between these questions. Specifically, there is the issue of how much clout schools and libraries and their allies among community groups, local and state government can exert to help shape the evolving architecture of regional telecommunications infrastructure. There is a definite tension between the shared needs of these groups and the tendencies of a monopolistic industry. The promise of the Telecommunications Act is a less monopolistic environment, and in such an environment community groups and local and state governments should have a stronger voice than in the past.

Insofar as public sector groups can begin to aggregate network traffic, services and support, there will develop new collaborations which can reinforce the abilities of these groups to make use of new telecommunications services. Furthermore, as has been forcefully stated in many messages in this seminar, few of these public sector groups are capable of going it on their own. Hence the development of shared regional infrastructure is a real necessity for them.

A number of questions come to mind in connection with this line of argument:

- What examples exist of effective community collaborations?
- Does the Telecommunications Act promote such collaborations or endanger them? (I'm thinking of provisions such as the prohibition of resale as a potential danger in this regard.)
- How can an enhanced competitive environment help schools and libraries? Are there new services likely to result? Is dramatic price competition likely to occur?
- What structures exist to facilitate needed community collaborations in the development of telecommunications infrastructure? Is this activity typically driven by school districts, municipal governments, community groups, libraries or other organizations?

Assignments

This week's assignments continue the pattern established last week:

- Continue to develop summaries of the Comments, Reply Comments and Further Comments in the On-line Repository. Send your summaries to library@info-ren.pitt.edu so they can be linked into the Web site as part of the Participants' Contributions.

- Post to the on-line discussion group on this week's topic – the aggregation of services and support by schools and libraries and the role of competition in this effort.

- Complete the on-line survey on the allocation of Universal Service subsidies.

Universal Service/Network Democracy
Week Five (September 23 – September 27)

In the final week of the Universal Service/Network Democracy on-line seminar, we will go over the following topics:

- Summary of the Fourth Week of the Seminar

- Future Universal Service/Network Democracy Seminars

- Integration with Existing Services and Coordination with Other Proceedings

- Assignments

Preliminaries

If you have not yet read the page on Preliminaries to the Universal Service/Network Democracy on-line seminar, please read it now.

Summary of the Fourth Week of the Seminar

The seminar continued at the rapid pace set previous weeks. There were 53 electronic mail messages from 36 seminar participants. These people were divided among the various participant groups as follows:

- Schools and Libraries: 18 people, 29 messages (55%)
- Universities: 5 people, 9 messages (17%)
- State and federal government: 5 people, 5 messages (9%)
- Business: 8 people, 10 messages (19%)

In addition to the seminar's e-mail-facilitated discussion there was a new on-line survey on the subject of the allocation of Universal Service subsidies. So far 36 people have responded to this survey, the results of which are available on-line. Also available on-line are the detailed comments which survey respondents offered on some of the survey questions. This survey will continue to be available for additional people to fill out in the upcoming week.

Here is a brief overview of the survey results to date:

1. Mechanisms: What mechanism should be used to provide Universal Service subsidies to schools and libraries?

> Slightly over 50% of the respondents favored a 100% discount "E-rate" with roughly 20% supporting cash grants and 20% supporting discounts on selected services. A strong majority favored some discount mechanism over cash grants or vouchers.

2. *Bona Fide* Requests: What minimal justifications should a school, library or school district be required to offer in support of requests for subsidized telecommunications services?

> The most broadly-supported response to this question (offered by 50% of the respondents) was that requested services should support a real educational need. 44% of the respondents argued that any request from an authorized individual should be regarded as *bona fide*. 44% also favored district-approved technology plans. Small percentages (in the 20%-25% range) supported state-approved plans, progress toward goals of the Telecom Act, and demonstrated knowledge of technology options. While state-approved plans did not gain broad support in the survey, there was extensive discussion of this issue in this week's e-mail submissions, as noted below.

3. Extent: Should Universal Service subsidies extend to groups which provide educational materials or support for educational organizations, such as universities and colleges or community centers?

> There was nearly a 50-50 split on this issue, with several people offering detailed comments on the topic.

4. Equity: How can the Universal Service Fund insure equity of access for all schools and libraries?

> This question may not have been clearly-phrased. One third of the respondents selected "other" and provided detailed comments; 30% specified a baseline subsidy; 25% supported per capita subsidies; and 22% supported income-based subsidies. But only 5% mentioned population density as a factor. I had intended this as shorthand for service in rural areas. In many e-mail contributions there has been strong support for connectivity in rural areas and for the need for special attention to the needs of these areas. And detailed comments from the survey tend to underscore this viewpoint.

Please consult the on-line analysis for a more complete picture. Since a relatively small number of people have filled out the form so far, these results should be regarded as tentative. Please fill out the survey now if you have not already done so.

Highlights of the detailed comments from the survey are as follows:

- The mechanisms used to provide Universal Service subsidies to schools and

libraries should be such as to encourage transmission efficiencies and competition among service providers. Subsidies which simply provide monopoly carriers with another assured revenue stream could be counterproductive if they simply raise telecommunication rates for the same community that is receiving the subsidies.

- There needs to be some assurance that Universal Service funds are leveraged to benefit their intended recipients. Some form of educational assessment should be tied to a continuation of any proposed subsidies.

- Colleges and universities can serve important roles as trainers and disseminators of technology practice. But subsidies for collaborations involving schools, libraries and universities or colleges should perhaps be limited to services purchased by the schools and libraries participating in the collaboration.

- Equity is a major issue for rural areas, where low population density and harsh geography can combine to make the cost of services far higher than in urban areas. Presently services such as ISDN, which is becoming commonplace in urban areas, are either unknown in rural areas or priced far above the cost of an equivalent number of POTS lines. (One ISDN line can carry data traffic equivalent to that of approximately 4 28.8 kilobit modems.)

- The issue of equity is closely tied to who administers the Universal Service Fund. Previously the Fund has been administered by the National Exchange Carrier Association. This arrangement would be inappropriate and a conflict of interest under the new Universal Service mandate, which calls upon the fund to do far more than simply allocate resources among the various carriers.

The principal topic for the fourth week's discussion had to do with the *aggregation of services* and *competition in the provision of services*. Several questions were offered to guide the discussion:

What examples exist of effective community collaborations?

> This topic generated more discussion than we have seen on any other topic in the seminar. Many contributors cited examples of successful collaborations and regarded such activities as essential for the sustainable use of telecommunications in local schools and libraries. Only through such collaborative ventures can adequate support be provided and can services be aggregated so that schools and libraries can purchase affordable connectivity.

Does the Telecommunications Act promote such collaborations or endanger them?

> Contributors emphasized the need for broad community collaborations. In Week One of the seminar there was much discussion of how effective such collaborations can be and how short-sighted it would be if the Act's Universal Service provisions were implemented in a manner which discouraged such collaborations.

How can an enhanced competitive environment help schools and libraries? Are there new

services likely to result? Is dramatic price competition likely to occur?

One contributor pointed out the need to balance collaboration, which supports the public interest, with competition, which often uses profit as the sole measure of success. Several contributors argued that there is little competition in most rural areas, and hence one cannot argue that competition alone will provide for the affordable and equitable distribution of telecommunications resources. And one contributor noted that discounts funded by mandated rate increases are inherently non–competitive in nature insofar as they simply assure existing service providers a new revenue stream.

What structures exist to facilitate needed community collaborations in the development of telecommunications infrastructure? Is this activity typically driven by school districts, municipal governments, community groups, libraries or other organizations?

A variety of examples were offered in the on–line discussion. A common feature of all these examples is a buy–in at the local level. Wherever state–planned initiatives have been successful, it's been where they have achieved local support and understanding in their deployment. The present week's discussion will provide further examples of the successful application of telecommunications technology.

In addition to the topics listed above, there were a number of other threads of discussion which took place on–line. Several of them represented continuations and conclusions of the previous week's discussions, which covered issues such as:

- Wireless technologies

- Access to free e–mail

- *Bona fide* requests

Topics new to the present week's discussion included the following:

- *The merits of state technology planning.* Several nice examples of successful statewide initiatives were presented. It's unclear how broadly duplicated such efforts might be. A key feature, as noted above, was the existence of local buy–in. Without this feature, state plans threaten simply to increase the bureaucratic load on a local school district. What states can do quite effectively is to provide checklists for local planners and to help promulgate standards for technology implementation.

- *The limits of technology planning.* There is an obvious point which several contributors underscored – that it makes no sense to require district planning if there isn't going to be any funding for a district's plan, once completed. This suggests that an RFP process might be an effective mechanism for the distribution of available funds, since it incorporates some measure of planning but links it explicitly to the distribution of funds.

- *Cost savings through networking technology.* It was pointed out that efficiencies in record-keeping and information transfer can partially offset the cost of educational networks. This, in fact, was the original justification for a number of statewide networking efforts. The broader topic of how networks can save money is one that bears further discussion in the seminar.

- *The demise of NPTN.* It was noted with regret that the National Public Telecomputing Network has entered bankruptcy. This organization had popularized the concept of Freenets, and its financial difficulties are perhaps indicative of a broader problem with the funding and sustainability of community networking efforts. A well-structured Universal Service Fund should help address this problem.

As always, you should consult the <u>original material</u> for the authoritative word on the issues mentioned above.

The assignments for the fourth week were a continuation of previous assignments, namely to participate in the on-line discussion, to provide materials for the library of on-line resources and to complete the on-line survey. You can look directly at the <u>full text of the on-line discussions</u> and the <u>many contributions to the on-line library</u> to see how this activity has been progressing. We appreciate the effort that people have been putting into the seminar and urge you to continue this work in the seminar's concluding week.

Future Universal Service/Network Democracy Seminars

Initial feedback from seminar participants suggests that many people have the following impressions:

- **This activity is an important one.** Federal officials working to develop rules for the implementation of the Universal Service provisions of the Telecommunications Act should have access to the opinions of those people who are working with telecommunications technology in local schools and libraries.

- **The volume of material is somewhat overwhelming.** While on-line access to the thousands of pages of comments that were submitted to the FCC on the subject of Universal Service makes this material accessible to local teachers and librarians for the first time, there is still too much for any individual to be able to absorb. Even the volume of contributions to the present seminar is a lot for most participants to handle.

- **There is an ongoing need for this type of activity.** When the Federal/State Joint Board makes its recommendations to the FCC in November, there will be another round of public comments to the FCC. At that time it might be appropriate

to conduct another seminar which focuses upon the content of the Joint Board's report. At a later date there will be a mandated review of the success of the Telecom Act in providing advanced services to schools and librarians. Public discussion of this topic could be invaluable in helping the FCC to ascertain what has happened in the field.

Information Renaissance would be very interested in extending the present seminar if there is sufficient interest and need. We have learned a lot in terms of how to organize and conduct an activity of this sort, and we hope that participants have learned a lot in terms of the scope and significance of the Universal Service provisions of the Telecommunications Act. Please send your comments to the on-line discussion at us-nd@info-ren.pitt.edu or by private e-mail to info@info-ren.pitt.edu.

Integration with Existing Services
and
Coordination with Other Proceedings

How will new discounts fit in with existing programs? What examples can we cite of the effective use of telecommunications services in local schools and libraries? What other proceedings at the federal and state level should people in schools and libraries be following to assure that there will be adequate coordination of the various programs which impact telecommunications services for schools and libraries?

The final week of the Universal Service/Network Democracy on-line seminar will be devoted to exploring the fit of new Universal Service subsidies with existing programs and projects. We'll be looking for examples of existing subsidies which are key to the success of current telecommunications programs and brief descriptions of successful programs with an indication of how new Universal Service subsidies might impact such programs. In your contributions to the seminar you might consider addressing the following points:

- What successful telecommunications projects have you been involved with?

- Did these projects depend upon any special telecommunications rates? If so, give a brief description of these rates and indicate whether you think these rates might be jeopardized by new Universal Service subsidies. (This could happen if, for example, state PUCs were to decree that new subsidies supersede old rate structures.)

- Do your projects depend upon any particular tricks of the trade? If so, describe these imaginative applications of telecommunications technology, and indicate whether these applications might not be possible in the environment of new Universal Service subsidies.

- What are specific areas in which ongoing projects might benefit from new Universal Service subsidies?

- Are there projects currently in the planning stages whose viability will depend upon the structure of new Universal Service subsidies? If so, indicate how the subsidies should be structured to assure the success of these new projects.

We're hoping that this week's questions relate directly to the experience of the majority of teachers and librarians who are taking part in the seminar. Please post this week if you have not had the time to contribute in previous weeks. By surveying individual participants we have come to the conclusion that our group represent over 2000 person-years of networking experience. This probably represents a greater level of networking expertise than was contained in the hundreds of industry-sponsored submissions to the FCC on the subject of Universal Service. Don't be shy about describing your part of this vast store of knowledge and experience. What you say might influence the direction of the Universal Service discussion so as not only to support the projects with which you have been involved, but to assure that similar projects will be able to flourish all across the country.

The purpose of the preceding set of questions is to try to tie up the discussions of the preceding four weeks in terms of their specific impact on the local classroom and library. Another sense in which we might try to tie up the various discussions we have heard in the seminar is to relate them to other proceedings currently before the FCC. Several seminar participants have made mention of these proceedings, which are likely to impact the FCC's implementation of Section 706 of the Telecommunications Act, which speaks of "advanced services" for schools and libraries.

The following list is taken from the FCC's Learnet Web page:

- Cable Reform

- Local Competition

- NII/SUPERNet (wireless)

We would be interested in hearing the extent to which local teachers and librarians might have participated in these proceedings. My own view is that the present implementation of Section 706 is too scattered for there to be any meaningful input from local schools and libraries, and we would like to suggest that there be a separate proceeding to deal with the implementation of Section 706. If there is support for this viewpoint from other seminar participants, we could perhaps communicate this suggestion to the FCC as a group. Whether or not aspects of these parallel proceedings which impact upon the implementation of Section 706 are split off into a separate

proceeding, it would be possible to include discussion of these other issues in any subsequent Universal Service/Network Democracy seminars. Please let us know if you think this would be a good idea.

I would like to thank the seminar participants for their dedicated attention to a broad and complex subject. The work that you have been doing in this seminar might well blaze the trail for a new form of citizen participation in the rule making process for federal and state governments. The task isn't easy, but rules such as those which will be implemented to assure Universal Service for schools and libraries are something that will affect us the rest of our lives. Whether we are working in classrooms or libraries, or whether we or our children make use of these facilities, I think that the effort we all put into this seminar is something we will be proud of as the Universal Service rules are promulgated and we see an enhancement of the networking efforts that so many seminar participants have pioneered. In some sense the Universal Service provisions of the Telecommunications Act serve to validate these pioneering efforts. By letting the Joint Board and the FCC hear of these efforts from people directly involved in them, we encourage the continuation of this work and the development of an extensive and effective telecommunications infrastructure for our nation's schools and libraries.

Assignments

This week's assignments continue the pattern established earlier in the seminar:

- Develop summaries of the Comments, Reply Comments and Further Comments in the On-line Repository. Send your summaries to library@info-ren.pitt.edu so they can be linked into the Web site as part of the Participants' Contributions.

- Post to the on-line discussion group on this week's topic – the integration of new Universal Service subsidies with existing services and coordination of these subsidies with other proceedings before the FCC.

- Complete the wrap-up survey for the Universal Service/Network Democracy on-line seminar. This survey will be posted on the Universal Service/Network Democracy Web site early in the week.

Universal Service/Network Democracy

Summary of the Fifth Week of the Seminar

In the final week of the On-line Seminar there were 38 electronic mail messages from 27 seminar participants. These people were divided among the various participant groups as follows:

- Schools and Libraries: 15 people, 23 messages (60%)
- Universities: 3 people, 3 messages (8%)
- State and federal government: 3 people, 3 messages (8%)
- Business: 6 people, 9 messages (24%)

The principal topic for the fifth week's discussion had to do with the *integration of Universal Service subsidies with existing services* and the *coordination of the Universal Service proceedings with other proceedings*. Several questions were offered to guide the discussion:

- What successful telecommunications projects have you been involved with?

- Did these projects depend upon any special telecommunications rates? If so, give a brief description of these rates and indicate whether you think these rates might be jeopardized by new Universal Service subsidies. (This could happen if, for example, state PUCs were to decree that new subsidies supersede old rate structures.)

- Do your projects depend upon any particular tricks of the trade? If so, describe these imaginative applications of telecommunications technology, and indicate whether these applications might not be possible in the environment of new Universal Service subsidies.

- What are specific areas in which ongoing projects might benefit from new Universal Service subsidies?

- Are there projects currently in the planning stages whose viability will depend upon the structure of new Universal Service subsidies? If so, indicate how the subsidies should be structured to assure the success of these new projects.

These questions elicited a large amount of discussion and a number of specific examples of successful network development projects. The projects cited ranged from individual school projects to statewide networks and included collaborations involving schools, libraries, local governments and businesses ranging in size from small startups to major telecommunications providers. An obvious lesson from this discussion is that there is no "one size fits all" solution to the networking needs of schools and libraries. Universal Service provisions that are too rigid run the risk of upsetting successful arrangements

currently in place. Examples were cited in which rigid state tariff structures have delayed the implementation of projects with broad corporate and public support. The broad range of successful projects indicates that there are many opportunities for the application of Universal Service to meet the networking needs of schools and libraries and provide stable long-range support for these organizations.

Several contributors expressed their concerns about the mechanics of implementing new Universal Service subsidies. At the state level there have been cases in which expected contributions at the state level have not been forthcoming. And several contributors raised the issue of possible untoward consequences of including Internet Service Providers in the pool of recipients for Universal Service funding. Specifically, there were fears that the present competitive market might be threatened and that the price of Internet connectivity might rise.

As always, you should consult the original material for the authoritative word on the issues mentioned above.

In addition to the seminar's e-mail-facilitated discussion there was an on-line survey requesting responses on the conduct of the seminar itself. So far 134 people have responded to this survey, the results of which are available on-line. Also available on-line are the detailed comments which survey respondents offered on some of the survey questions. This survey will continue to be available until a majority of seminar participants has responded. We will be sending out reminders to all seminar participants who have not yet responded. This information will be useful in crafting other activities of this type, whether for future telecom regulations or rule-making by other federal and state agencies.

Here is a brief overview of the survey results to date:

1a. Topics: How would you describe the topics cover in the seminar?

> 45% of the respondents regarded the seminar's topics as valuable, and nearly 60% regarded the topics as relevant. A small percentage felt that the range of topics was too broad to cover or that the issues were too complex to deal with.

1b. On-line Materials: Which on-line materials did you find to be useful?

> The weekly summaries were the most popular item, chosen by 67% of the survey respondents. Participants' contributions were also selected by 48% of the respondents, while the repository of comments to the FCC and the archive of useful documents were each cited by 34% of the respondents. A smaller percentage (25%) of respondents mentioned the archive of on-line discussions, but since the majority of seminar participants received this material by electronic mail, the on-line archive may have appeared as redundant.

1c. Surveys: What was your opinion of the surveys?

> 46% of the respondents regarded the surveys as a good way to assess views of the

whole group, and 34% viewed them as a useful adjunct to the on-line discussion.

2a. Organization: How did you regard the organization of the seminar?

A high percentage (72%) felt that the seminar's organization was just right, 26% felt it was too loose, a view which received additional support in comments attached to some of the surveys.

2b. Moderation: The seminar's mailing list was set up as a moderated list, with the moderator reviewing all traffic and adding occasional editorial comments. How did you regard this aspect of the seminar?

A significant majority (85%) regarded this as a strong point of the seminar, with only 13% regarding the process as too open and only a handful regarding it as too constraining.

2c. Duration: The seminar took place in a five week period. How would you describe this scheduling?

There was a split here. Half the group felt that the length was just right, a quarter thought it was too long, and another quarter thought it was too short. On the average one must conclude that the seminar's length was reasonable.

2d. Time required: How would you characterize the time required for you to participate in the seminar?

One third of the respondents felt that the time required was reasonable; one third felt that the time required was excessive, but necessary; and one fifth felt that it was simply too much.

2e. Access: The seminar was organized so that material would be accessed through a combination of e-mail and the World Wide Web. How did you access this material?

A strong majority (68%) used e-mail and Web access.

3a. Achievement: Have you achieved what you hoped to accomplish in the seminar?

Positive responses dominated on this question. 60% of the respondents achieved part of what they had hoped to accomplish; 16% exactly what they had hoped to accomplish; and 12% achieved more than they had expected to accomplish.

3b. Interactions: Have you interacted privately with other people registered for the seminar?

There was a split here – 35% yes and 45% no, with 20% expecting to initiate such interactions in the future.

3c. Participation: Have you written to the FCC or other public officials in relation to the Telecommunications Act of 1996?

> There was a split here as well – 37% yes and 45% no, with 18% expecting to do so in the future.

3d. Recommendations: Would you recommend this type of seminar to other people in future?

> Response here was very positive: 51% would recommend the seminar to other, and 44% would also participate in another such seminar.

Please consult the on-line analysis for a more complete picture. Please fill out the survey now if you have not already done so.

Highlights of other comments from the survey are as follows:

- It will be valuable to keep the on-line materials available in the future.

- Participants have been sharing information from the seminar with other groups in their communities.

- Focussed discussions were more productive than the initial tendency to look to the FCC for solutions of *all* problems pertaining to school and community networking.

- Questionnaires would have been a useful mechanism for eliciting participants' views on topics discussed in the seminar.

- Some technical details may have been beyond the grasp on some participants.

- The seminar helped create an awareness of the needs of other people and communities.

- Enforcement of a one postings per person per week limit would have allowed more people to participate.

- The seminar came too late in the FCC's process to be of much significance.

- It would be useful to provide a forum for continuing the discussions started in the seminar.

In closing the Universal Service/Network Democracy On-line Seminar, I would like to thank the staff and volunteers at Information Renaissance who have helped to make the seminar work, the contributions from funders who responded to our request for support on an unusually short time schedule, and the thousands of hours of work that have been put in by our 500-plus participants. The group that has been formed to participate in the seminar is itself a valuable resource in the implementation and verification of the

Telecommunications Act of 1996. Information Renaissance will endeavor to keep this activity alive in one or more of the following possible venues:

- Scheduling of another on-line seminar if the FCC calls for further public comment on Universal Service issues.

- Maintenance of the on-line repository of comments submitted to the FCC on these topics.

- Development of a mechanism to verify the successful implementation of provisions of the Telecommunications Act.

- Involvement with proceedings at the state level to deal with intrastate provisions of the Telecommunications Act.

If you have suggestions to offer on the direction of this work, please contact info@info-ren.pitt.edu with your advice. Thanks again for your participation, and good luck in hundreds of local telecommunications efforts in which members of the seminar are currently involved.

Universal Service/Network Democracy On-line Surveys

In order to make it easy for many people to participate in the discussions of the Universal Service/Network Democracy on-line seminar, we have set up a mechanism to poll people registered for the seminar through a series of on-line surveys. This page shows the various surveys in progress. Once a significant number of people have completed these survey forms, summaries of the results will be made available through this page.

- **Scope of Universal Service Subsidies**
  - On-line Survey
  - Results
  - Additional Comments

- **Allocation of Universal Service Subsidies**
  - On-line Survey
  - Results
  - Detailed Comments

- **Conclusion of the On-line Seminar**
  - On-line Survey
  - Results
  - Comments

Return to Universal Service / Network Democracy or
Return to Information Renaissance home page.

Universal Service/Network Democracy
Survey Form
Scope of Universal Service

Please supply the following information to identify yourself:

Name: (Last)   (First)

E-mail:

Organization:

City: **State:**

Please answer each question by selecting one or more of the checkboxes provided or typing in requested information.

1. Purpose: How should we view the purpose of the Universal Service Fund for schools and libraries? Is it to provide equity of access to telecommunications services, or is it to establish a public right of access to such services?

         Equity
         Public Right

2. Educational Needs: In terms of the needs of teachers, students and library patrons, what types of telecommunications services are of the current greatest interest to schools and libraries?

         Voice
         Video
         FAX
         Private Data Services
         Internet Data Services

3. Breadth vs. Depth: Should the range of services covered by the Universal Service Fund be narrow, so that the magnitude of available discounts can be large, or should the range of services be broad, which would result either in smaller discounts or a larger Fund? (The next question provides examples of a broad range of services.)

         Narrow
         Broad

If you favor that a broad range of services be covered by the Universal Service Fund, which of the following do you prefer:

         Smaller Discounts for Covered Services
         Larger Universal Service Fund

4. Services to be covered: Which types of services should be eligible for subsidy under the Universal Service Fund?

         Connectivity to the Site

```
       Internal Wiring
       Routers and Servers
       User Access Devices (Computers)
       Ongoing Upgrades of Telecommunications Capabilities
       Technical Support
       Staff Training
       Assessment of the Educational Value
          of Telecommunications Programs
```

Please add any other comments you have on these questions:

Thanks for participating!

Return to Universal Service/Network Democracy without completing the survey or
Return to Information Renaissance home page.

Analysis of Survey:
Scope of Universal Service

Date of Summary: Sep 20 17:14:32 EDT 1996
Number of Respondents: 100

1. Purpose: How should we view the purpose of the Universal Service Fund for schools and libraries? Is it to provide equity of access to telecommunications services, or is it to establish a public right of access to such services?

> (65, 66.32%) **Equity**

> (33, 33.67%) **Public Right**

2. Educational Needs: In terms of the needs of teachers, students and library patrons, what types of telecommunications services are of the current greatest interest to schools and libraries?

> (34, 34%) **Voice**

> (39, 39%) **Video**

> (18, 18%) **FAX**

> (15, 15%) **Private Data Services**

> (94, 94%) **Internet Data Services**

3. Breadth vs. Depth: Should the range of services covered by the Universal Service Fund be narrow, so that the magnitude of available discounts can be large, or should the range of services be broad, which would result either in smaller discounts or a larger Fund? (The next question provides examples of a broad range of services.)

> (38, 39.17%) **Narrow**

> (59, 60.82%) **Broad**

If you favor that a broad range of services be covered by the Universal Service Fund, which of the following do you prefer:

> (8, 14.03%)   **Smaller Discounts for Covered Services**

> (49, 85.96%) **Larger Universal Service Fund**

4. Services to be covered: Which types of services should be eligible for subsidy under the Universal Service Fund?